

CRITIQUE ^{EXERCISES}
OF

EXERCISE FLASH BURN

7 MAY 1954.

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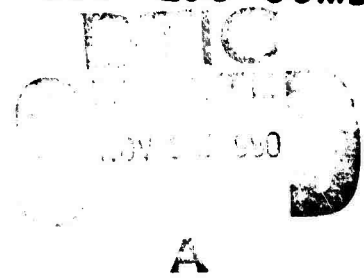


HUMAN RESEARCH UNIT #3, OCAFF
P. O. Box 2086
Fort Benning, Georgia

XVIII AIRBORNE CORPS
82nd AIRBORNE DIVISION
37th INFANTRY DIVISION

3rd ARMD CAV REGT
278th RCT
306th LOG COMD (A)

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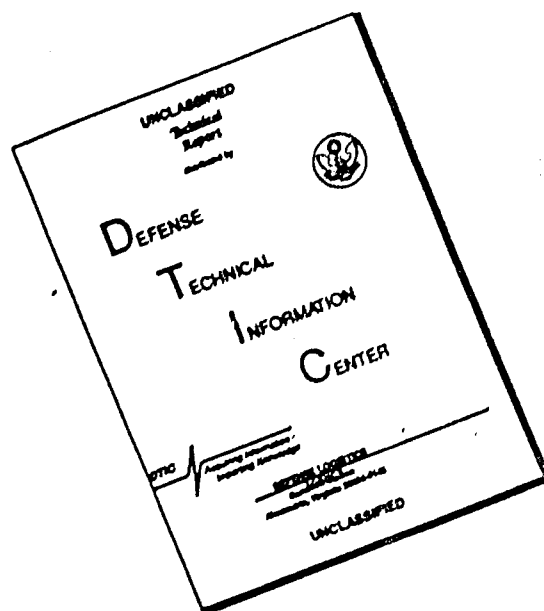


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26 July 1954

SUBJECT: Critique of Exercise FLASH BURN

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Contained herein are comments of officers who participated in
the Critique of Exercise FLASH BURN, 7 May 1954.


A. R. BOLLING

Lieutenant General, USA
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C R I T I Q U E

E X E R C I S E F L A S H B U R N

7 MAY 1954

FORT BRAGG, NORTH CAROLINA

BRIG GENERAL MOLITOR:

Before commencing the critique, I have an announcement of interest to unit commanders.

The final reports to be submitted to the Maneuver Director by unit commanders and staff sections, as required by paragraph 3, Annex 11, of the General Plan for Exercise FLASH BURN, will be submitted not later than 22 May 1954.

General Ridgway, Gentlemen: This critique will be limited to a brief discussion of the play of the maneuver followed by the comments of the senior commanders and participants. The Final Report will cover the detailed objectives of the Exercise and the results and recommendations. There is one thing which I should like to make clear before the details are discussed. There were nineteen specific objectives to be incorporated in this maneuver. There was a definite and limited piece of terrain on which to hold the Exercise. Constant thought had to be given to the safety of the troops. These three factors are in conflict with each other and with realistic combat conditions. That conflict is the cause of certain artificialities in the maneuver. Geography, not strategy or grand tactics, dictated the location of our units, their movement, and their operation. The manner of dropping the 82d Airborne Division was dictated by safety and the availability of land. Although safety requirements caused by marginal weather interfered with the air-landing of the 37th Division, we did not permit simulated atomic attack and artillery fire to interrupt that landing because of the dangers involved in diversion of aircraft. There were other unrealistic situations.

We call attention to these artificialities at the start of the critique in order that attention will not be diverted by these unrealistic actions, but will be focused on the objectives of the maneuver and the training which was accomplished.

Before I introduce the next speaker, I should like to take this opportunity to express my appreciation for the contributions to this maneuver by the members of the general and special staff of Maneuver Director Headquarters. Although I have been fortunate in my professional associations throughout a relatively long period of service, I have never been more fortunate than during the months of preparation in execution of this Exercise. These members of the staff showed keen intelligence, great imagination, and high professional knowledge in the approach to the many problems involved. With such a team, the most difficult task is easy to accomplish, and the lot of the Chief of Staff is a happy one.

BRIG GENERAL McQUARRIE:

General Ridgway, Gentlemen: I can think of no better time than now to praise the work of my umpire staff as well as all the umpires that participated in FLASH BURN. Without previous umpire planning experience, they nevertheless developed the organization and techniques that you witnessed in this Exercise. If at times it appeared that there were more umpires at the scene of an action than there were U. S. and Aggressor forces combined, it was because of the anticipated need for adequate control.

Something new in the procurement of umpires was used for the first time in Exercise FLASH BURN. The Third Army Commander directed the formation and training of packets in the 47th Infantry and 11th Airborne Divisions to be used in umpiring the 37th Infantry and the 82d Airborne Divisions respectively. Several advantages accrued by this approach to the umpire problem. A considerable monetary saving resulted in the movement of the umpire packets to the maneuver area over the usual method of movement by individual officers. In addition, by being so organized as to be self-supporting, umpire packets reduced the requirement for the organization of necessary overhead support detachments.

The packets came to the maneuver area complete with vehicles, communications equipment, and operators. This proved an economy measure in that property control, care and maintenance were exercised through the chain of command. The training and experience gained by the packets in establishing, maintaining, and operating communications in the field should prove of great value to the parent units. Any other method of procuring umpires would result in an inferior quality of umpiring, comparatively speaking, because of lack of familiarity with the organization and tactics of the units being umpired. It gave the Chief Umpire a chain of command that was already established, and thus provided better control.

I am convinced that an umpire cadre should be established as a nucleus around which could be built the umpire planning staff for any future maneuver. Another solution to the problem of assembling a trained umpire staff would be the establishment of a course of instruction at one of the service schools which would encompass all the various facets of maneuver control. It is a reasonable assumption that training is a basic purpose of this or any other maneuver. Obviously, if all operations were executed without flaw, there would be no need for such training. Hence, whenever basic principles were violated, the units were penalized by the umpires.

Umpires, Aggressor Force, and Maneuver Control Signal units enjoyed distinct training benefits from this Exercise. It is my sincere hope that you, for whom this Exercise was designed, received at least as much beneficial training. If so, it was effort and money well spent.

The umpire has a very difficult job. He is generally junior to the commander of the unit to which he is assigned as umpire. He must be diplomatic but impartial. He must avoid having to render arbitrary decisions. He must be alert to prevent physical contact by opposing forces. He must be sensitive to any change in plan so that he may give timely warning to the next higher umpire in his chain of command. He must endeavor to inject realism into every situation. He must know the organization and tactics of the unit he is to umpire. Finally, he must be interested in doing a good job. I believe the umpires made every effort to qualify under the foregoing criteria.

There is at least one lesson that everyone should have learned during this Exercise. That is, to dig deeper and better holes. If the concepts under which we assess casualties are sound, a hole in the ground is a

soldier's best means of survival from an atomic blast. There are a few of my contemporaries present who will remember the well known cartoonist of World War I - Bruce Bairnsfather. The principle character was a British character known as "Old Bill." I remember one cartoon in which Old Bill and a buddy were huddled in a shell hole half full of mud and water in No Man's Land, the shells bursting everywhere. Old Bill's buddy is griping about things in general when Old Bill says, "If you can find a better hole, go to it."

MAJ. GENERAL WILLIAMS:

General Ridgway, Gentlemen: The major objective of the Exercise can be expressed in one word--Training.

I am sure that every commander will agree that this objective was accomplished and, from the individual, the unit, and the combined training viewpoint, the maneuver was a complete success. The supplementary objectives of the maneuver you have seen on the slides.

The maneuver emphasized airborne and air transportability operations. The air-drop phase, we think, was one of the most successful training drops in airborne history. The personnel of the Eighteenth Air Force, the XVIII Airborne Corps, and the 82d Airborne Division can take the greatest pride in the superior job they did. Because of circumstances beyond control of the Eighteenth Air Force, a shortage of aircraft and certain limitations on loading of aircraft, the administrative introduction into the airhead of a large amount of heavy vehicles and equipment was required.

The air transport phase of the operation was one of major proportions, and we think that it was very successful. The Eighteenth Air Force lost the services of twenty-four crews just prior to the maneuver, and this reduced the airlift potential. This, combined with unusually adverse weather that we ran into, extended the time of the lift of the 37th Division from three days to over six days. This, of course, created an unnatural situation. It brought out the over-riding influence of weather on airborne and air-landing operations, and our complete dependence on the Air Force for adequate support for such an operation. The Exercise has confirmed also that only with the mobility and flexibility of airborne and air-landed units can we meet the demands of the atomic age.

I have spoken about the air transport phase. In the tactical air phase, our support was also superior. The Ninth Air Force cooperation and participation was of the highest order and contributed immeasurably to the realism, the training, and success of the Exercise. On the Army side, our units improved their procedures in using this air as the Exercise progressed, and as a result, more profitably used it. General Douglass and General Timberlake will say a few words about the air participation in the Exercise from the air point of view.

With reference to new doctrine, techniques, and tactics--in my opinion, the principles of war have not changed. The Field Service regulations are generally as sound today as when they were written. In fact, we all could profitably re-read the principles enunciated in them for specific action. I am sure that some of the orders which were issued during the maneuver would have been changed if this had been done.

I have said that the principles have not changed. The tactics and the techniques are changing rapidly. For example, an element in which this maneuver differed from previous maneuvers was that this was our first time in a maneuver that both sides employed air and ground-delivered atomic weapons. We had realistic atomic play, offensively and defensively. This included collection of intelligence, target development, through the chain of command, to the actual delivery of the weapon. On the defensive side, we were hit by atomic strikes, had casualty assessments, and took tactical action and damage control action to minimize the effects. Our procedures were new and they were untried. We made mistakes. We improved our techniques as the maneuver went on. We progressed a lot, but we have much to learn in this field.

It was apparent during the planning phase of the maneuver, that commanders and staffs will be deeply involved in atomic warfare. The magnitude of effects of atomic weapons requires that employment be coordinated at many levels. The coordination itself we cannot eliminate, but through proper staff procedure, we can cut the time to a minimum.

Planning for the employment of atomic weapons during the maneuver was logically done. The collection and timely dissemination of intelligence concerning the location and strength of Aggressor targets are major areas in which improved procedures must be developed.

The extreme importance of cover and protection was demonstrated in the umpiring of casualties for each Aggressor shot. We know now that when we stop, we must dig.

Techniques for employment of our forces in this atomic age require more detailed examination and test. Dispersion by units is an accepted principle. We need new unit SOPs to cope with the mass of information which must be passed up and down the command prior to each atomic preparation.

The Maneuver Director was pleased at the results which came from the training efforts of commanders prior to the maneuver to learn to play this phase of the maneuver.

For obvious reasons, we over-emphasized the atomic phase of the Exercise. As a result, many commanders neglected or failed to use conventional weapons to the maximum. The organic weapons of our divisions are still our most effective means of destroying the enemy and winning battles. Our firepower has been greatly augmented, but our conventional weapons are not obsolete. Our men must be trained to use standard weapons to the maximum.

It is impossible, in the time available here today, to give detailed comments on the operation of individual units which participated in the Exercise. Actually, there were over 500 company-size units of all branches and types employed during FLASH BURN. We expect each individual commander at each echelon, in his own critique, to thoroughly cover the comments on his own units.

I would like, however, to mention briefly a few salient items in each field which were brought out by the maneuver. Our Final Report will cover all the maneuver activities and will include recommendations.

First, in the G-1 field, on casualty reports. The simulated battle casualty reporting was well done. The problem was more involved than usual because of atomic play. The simplified method of reporting mass casualties which we used was fast and accurate.

Replacement play was very limited in scope. The use of atomic weapons makes the present system of individual replacements inadequate, we think, and the unit replacement system probably will be required.

Safety was given great emphasis prior to and during the maneuver. The results were highly gratifying. During the period 19 April to 6 May in this force of over 60,000 men, only four fatalities occurred. Of those, none, I repeat, none were attributable to troop participation in the play of the Exercise. The prisoner-of-war play was on a limited basis to keep the personnel in more active parts of the maneuver.

In the G-2 field, intelligence play began on E-30 and was maintained throughout the maneuver. The training in intelligence functions appeared better at all echelons than in past maneuvers. There is still inadequate effort to verify information and develop true combat intelligence. Except for the passage of intelligence regarding possible atomic targets, which was generally good, the dissemination of intelligence, particularly to higher headquarters, was slow and it was spotty. Too frequently, a higher headquarters had no knowledge of the situation until it became critical. Plans to meet the crisis had to be made after the crisis had arisen. Prompt passage of all items of enemy information to higher and supporting commands permits pre-planning to be made and warning orders to be issued in anticipation of critical situations.

Our security consciousness has improved, but it's still not satisfactory. PWs readily released tactical information to their captors. Frequently, documents taken from PWs were not forwarded to higher headquarters as ordered.

In the G-3 field, I have covered in general some comments on the airborne and air-landing operations. I would like to add a few more. Safety precautions and the scarcity of troop aircraft did make this phase somewhat unrealistic, as I have said. Actual combat conditions would probably demand a simultaneous drop of all nine infantry battalions and the use of a less vulnerable method of approach. Atomic weapons

provide a means of artillery preparation prior to an air assault that has hitherto been lacking. Such support increases the possible objectives for this type of attack. Instead of avoiding areas of troop concentration, which has been necessary in past operations, it may be possible to make an air assault on occupied areas, destroying by atomic preparation those troops which would otherwise be available for counter-attack against the airborne troops on the ground.

Hindsight is 20/20. The order of arrival of our units of the 37th Division was generally more administrative than tactical, as applied to the whole picture. It would appear that the first reinforcements needed by an airborne division which has landed are the supporting weapons. Had the artillery and heavy mortars of the 37th Division been in the early loads, the 82d would have been better prepared to throw back the Aggressor attacks and expand the airhead.

Aggressor practiced electronic warfare for varying periods throughout the maneuver. The electronic warfare personnel had instructed all participating troops on the capabilities of these EW units. This instruction was very thorough. Its effect was to improve radio discipline and increase emphasis on alternate means of communication.

The Joint Operations Center functioned well from the start of the maneuver and its efficiency increased daily. The tactical air support furnished by the Ninth Air Force was excellent and was furnished realistically and with whole-hearted cooperation.

A few words about the G-4 field--The logistical support for the maneuver was furnished by the 306th Logistical Command. It was necessary to divide it into two parts--the larger group acting as Third Army Service Command and the other as Aggressor Service Command. All logistical support for the troops was furnished by service units under the 306th Logistical Command. Hence, this play more nearly approached the problems of actual combat than any other operation in the maneuver.

Although the majority of service units were phased into the maneuver area far in advance of the combat troops, they showed, from the start, great enthusiasm in all their operations. Aware of their vulnerability to atomic attack, they went underground--and I mean underground--and showed imagination and energy in protecting their installations. Supply services operated day and night on the ground and by cargo aircraft into the airhead. Aerial resupply by parachute drop was effected only during daylight hours, because of the danger to personnel in the area due to night drops. Third Army Service Command was subjected to an Aggressor atomic attack to test the operation of the area damage control plan. Damage control was instituted in a matter of minutes after the attack and the plan proved to be apparently adequate.

Ordnance units performed maintenance on a round-the-clock basis.

The Signal units, considering their training, gave an outstanding performance in this Exercise. Communication improved throughout the maneuver as the operators gained experience.

The Transportation units covered 6,600,000 vehicle miles during the maneuver.

Chemical Warfare units were active with both Aggressor and U. S. Forces.

Field Dental units provided dental service.

The Engineers were most effective in their normal duties of road maintenance and the supervision of mine construction.

The Medical installations were well laid out and functioned efficiently, with both real and simulated casualties.

Quartermaster depots and supply points were busy night and day.

Finally, I believe we can truthfully say that as a result of the preparation for, and the participation in this maneuver, all troops which participated have greatly improved their combat readiness.

I will be followed by General Cleland, Commanding General of the XVIII Airborne Corps.

MAJ GENERAL CLELAND:

General Ridgway, General Weyland, General Dahlquist, General Bolling, Distinguished Guests, Gentlemen: For the want of a nail, the shoe is lost. I have always contended in combat, as well as maneuvers, that it is the little things that cause the major breakdown to the problems; that is, as far as the general operations of the maneuver is concerned. Be it good or bad, this is from a Corps point of view. The failure to read orders carefully, the delivering of a message late, the failure to post a guide as directed, the not-quite-positive about a certain point for being sure it is clearly understood, to give and to accept small pieces of misinformation, the failure of the staff and/or the commanding general to inspect to see that orders are carried out.

Every one of the above--though little things--cause major breakdowns, but temporary in the maneuver which otherwise would not have happened if those little things had been done. Therefore, I cannot stress too much from the troop angle the need for constant and continuous inspection by staffs and commanders to see that orders are carried out as directed.

This, possibly, will be a slight repetition. In this Exercise, it was felt that even though it was outstanding in every respect, that perhaps there were too many objectives. The integration of atomic evaluation objectives into an airborne exercise, which in itself is a very

complex operation, including the ground linkup and the air transported division, just poses so many problems that we of the Corps felt we could not really give each objective the full attention we desired. With a highly trained staff, including a maneuver staff that had been together for a long period of time, all the objectives might have received their full attention. Therefore, I would like to suggest that in future exercises, perhaps we could have one main objective and build the maneuver around that objective.

In every maneuver where there are two services acting on cooperative basis, there is one principle request by commanders--joint command. This is accepted as joint doctrine. This is one of my principle recommendations. We don't care who commands--whether it is the Army or the Air Force--in an airborne operation, but we should have one commander.

In regard to the larger aspects of this maneuver, we recommend that a mass parachute or airborne assault should not be conducted in the manner that this airborne assault was made. What we want is mass--the entire division or divisions dropping simultaneously on fourteen or fifteen drop zones. This would take about seven hundred planes, whereas we used the shuttling system of about 180 C-119s. Both the airmen and the paratroopers did a magnificent job with the means that was made available to them. We should like to recommend that in the future, if there are only enough planes to lift a regiment, then use all of them for a complete drop of that one unit.

The accomplishment of the air-landing phase from the Corps point of view is questionable. That is, if we could air-land as early as we did in a perimeter ten miles in diameter. This phase was not played tactically, so its results are questionable. Here we learned that weather plays an all-important part and may result in a crisis if all dependence is placed on air-landed units, even assuming that for safety we stopped for weather that may have been flyable. Again, what we want if we are to air-land troops is a rapid, sure concentration in the airhead. Certainly we would also have needed to construct several temporary runways in the airhead to augment the main field in case of damage and to provide dispersion.

In regard to the linkup phase, we learned that much more coordination and planning is necessary than we of the Corps did, to insure a smooth, rapid linkup. Units entering the airhead in the linkup must move rapidly, possibly in small closed-up increments at night, well guided, to definitely prepare bivouac areas or positions into the airhead. We found that once the landtails had entered the airhead that great care must be given to the use of the main routes of communication because we shortly found them congested, and we had not figured that we would have 5,000 to 6,000 tanks, vehicles, guns, and trailers moving in the airhead over a limited road net. This points out the need for early expansion in the airhead.

It is recommended that the future airborne exercises of this type, that we have just concluded, be conducted on the Fort Bragg Reservation. There were many administrative problems in preparing Camp Mackall. However, it is quite evident that the Mackall Airfield was a necessity.

Communications: Again we learned that communications are vital. It appeared that the lower units were more affected by electronic interference. Our own training--that is, the Corps--of communications personnel, was not up to the standard needed in Corps operations. We learned that the effect of atomic weapons on communication is going to require us to use more 'copters, motor messengers, runners, and even pigeons. Communication is definitely one of our biggest problems.

Atomic weapons play: The Corps was guided and directed to play the problem of atomic weapons in accordance with the Department of Army Training Circular No. 5, which placed the atomic advisors in the Corps G-3 Section. From the experience gained in this maneuver, it is recommended that the atomic weapon be treated as another high-powered artillery piece or air arm, and the control be placed in the Fire Support Coordination Center. This Center now controls artillery and tactical air support and has more means, know-how, communications and other facilities required, for expeditiously coordinating this atomic support. Here the Corps commander retains control. His G-2 and G-3 personnel, however, must be sufficiently cognizant of the weapon to recognize potential targets and to be able to integrate the weapon into the scheme of maneuver. The Fire Support coordinator should prepare firing data to include methods of delivery, KT yield, height of burst, time of delivery, and ground zero.

Tactical Air Support: Joint Operations Center system as imposed on the airhead commander in this operation is somewhat inflexible. Allocation of Air Force effort in support of a Corps airhead should be made at Army or higher level, but utilization of these aircraft must be delegated down to Corps throughout the operation and to division in the assault phase in order to effectively employ tactical air. In other words, push the direction of tactical air down one level to what might be classed as a Corps level JOC in an operation of this type.

Helicopters: It is strongly recommended that the use of helicopters be integrated into all future maneuvers to a greater degree. The value of moving reserves quickly from one side of the perimeter to plug the breach on the other side is clearly evident. With the receipt of the new H-16 'copter, carrying some forty men plus three jeeps, it becomes more important.

Intelligence: It is recommended that a greater effort be made in the future to play and improve our photo reconnaissance for the Corps. The following is a tabulation of our photo missions:

Actual number of missions requested--37,

Number of missions approved--30,

Number of photo missions received--14,

Average time from requested TOP to delivery of photos--27 hours and 45 minutes,
Fastest time--5 hours and 15 minutes,
Slowest time--72 hours and 35 minutes.

Logistics: It is felt that the most significant factor from a logistical standpoint was the operation of the logistical control group. This group was well organized to perform its mission of unloading, documenting, storing, and distributing of supplies to units. Its organization retained the necessary flexibility and successfully handled extreme fluctuations of tonnages in the airfield. Further exploration should be made in the utilization of this type of organization.

Personnel: From a personnel point of view, atomic warfare creates a requirement for a careful study of our personnel replacement system. There probably will be needed an increase of individual replacements as provided now in our present system. It is recommended that careful consideration be given to the organization and employment of additional separate infantry battalions and separate regiments as unit replacements for organic elements of infantry divisions. This would permit the organic element to be withdrawn, reorganized and trained, and re-equipped. Prior to the employment of these separate unit replacements, they could be given any number of appropriate missions, either in the communications zone or in the combat zone.

The Medical plan: It is recommended that there be a delineation of responsibility between the Army and the Air Force for the air medical evacuation of casualties from the airhead during an airborne operation. Duplication of air medical holding detachments on the landing strip in the airhead is an example.

Under medical coverage, we should note that the use of area damage control parties which employ medical personnel, as well as others, is premised on damage control, according to the Manual, being assessed in communications zones or behind the line. When our front line units were hit, the enemy exploited the blast; the damage control personnel were unable to assess damage because of capture by the enemy. It is recommended that this receive further study.

In closing, I would like to state as a Corps commander that my commanders and staff feel that FLASH BURN was an exceptional maneuver; well planned, very well executed, successful in accomplishing its objective, and very instructional. I feel it is the best maneuver in which I have had the pleasure of taking part.

May I make one more important recommendation: Go Airborne.

MAJ GENERAL DOUGLASS:

Listening to certain parts of General Williams' and General Cleland's speeches, I believe that they covered what I had to say. I don't know where they got my notes.

General Ridgway, General Weyland, and fellow officers: TACAIR 54-7 was an Exercise designed for two purposes: (1) to exercise all air units--all tactical air units--in every phase of their operation and training; and (2) to support the Army forces in Exercise FLASH BURN in their maneuver. We accomplished, I believe, both of these objectives.

As far as TACAIR 54-7 was concerned, our fighter bombers and recon-aircraft combed the Southeast part of the United States, from Virginia to Florida. Troop carrier aircraft operated from the West coast to the East coast.

General Timberlake will cover Ninth Air Force operations, so I would like to cover for General Alexander, who commanded the Eighteenth during this Exercise, certain troop carrier phases.

The airdrop of the 82d Division: In three years of continuous exercises, I have never seen such perfect weather conditions existing through the daylight hours. I believe that the wind never got above seven knots. I was proud of the troop carrier crews and I know General Cleland was proud of his airborne people, in that we had no fatalities, very few minor injuries, and we put the men on small drop zones.

In the move of the 145th RCT, we were blessed with normal weather and it was a normal routine smooth operation, from Alexandria, Louisiana, into Pope Air Force Base.

On the air-landed phase of the 82d Division, the Eighteenth Air Force capability was not reached. We had only one airstrip in the airhead; had we had three airstrips where we could have landed simultaneously, the air-landed part would have got in much sooner.

On bringing in the reinforcements, the 37th Infantry Division less the RCT previously moved, weather finally caught up with us. I looked at the weather map at least six times a day and here were the black areas that came out from the Tinker, Oklahoma Weather Central. These black areas meant tornado and extremely hazardous flying conditions. This was a training exercise, and I wanted to play it safely. We were moving the 37th Infantry Division for the first time. I wanted to be assured they had a good ride. We were training aerial port people. The 37th Division was new in loading, lashing, and unloading of equipment. If we had flown in extremely turbulent weather, some load might have broken loose inside the aircraft.

The weather was not always as predicted. We could have flown more hours than we did. We probably flew a few missions when we shouldn't have. But, all in all, that is a delay which is known or can be expected. I talked to General Bolling about it and I heard him talking to the Corps commander. He said we will play this Exercise as it occurs because in wartime you can expect those delays. The troop carrier units were shifted when we found we wouldn't get all the 37th Division in. We had to form a new carrier airlift support unit, gather aerial port people from other stations, to make that shift in the move from Alexandria there instead of Alexandria here. We got wonderful training out of it.

My recommendation is, if we are going to make a show out of these training exercises let's not depend upon perfect weather conditions, but have slightly larger drop zones. Let's have more airstrips where they're built by the Engineers, so that we can put more air-landed troops into the airhead sooner. Let us continue the training of the air mobility of the infantry divisions, and of course, continued training with the airborne.

I mentioned before that I have had three years of continuous exercises. This, to me, was the best training vehicle we have ever had since the war. In our rapid turnover of personnel within the Eighteenth Air Force, many of the men who learned things in this exercise will be going out of the service, but I know that they will retain enough so that if they are needed on a real E-Day, they won't be so hard to train.

This has been the smoothest exercise as far as cooperation and coordination between the Army and Air Force. I could not ask to work with a better team than General Bolling, General Williams, and their staff. The Eighteenth Air Force had smooth operations with the Third Army. I hope in the next exercise, we can learn just as much as we learned in this one. Thank you.

MAJ GENERAL TIMBERLAKE

General Ridgway, General Weyland, Fellow Officers: In the brief period allotted to me I shall confine my remarks to the so-called high spots of the exercise. In the LONG HORN Maneuver two years ago, two problem areas developed insofar as my operations were concerned; one was the pre-planned mission and the other was photo reconnaissance. At the conclusion of LONG HORN it was agreed between the Army and the Air Force that a joint effort would be made to adjust the difficulties. I think that much improvement was achieved in FLASH BURN, but there is still room for further progress.

As to reconnaissance: The joint Photo Center which was established at Shaw Air Force Base in this maneuver proved to be the best supported facility of its kind that I have seen either in maneuvers or during the first year and one-half in Korea. The Army Reproduction Center, The Photo Interpretation Center, The Signal Center and the Liaison Center, in my opinion, worked well.

In contra-distinction to the time that my esteemed friend, General Cleland, mentioned, I might point out that in several priority missions the average time of delivery from the time over target to the Army Reproduction Center was about two and one-half hours. There were occasions, I was informed, when the liaison pilots were unable to locate the specific units who had requested the photographs. However, I think both the Air Force and the Army showed a great deal of improvement in this area over past performances, and there is every reason to believe that further progress can be attained.

As to preplanned requests: Certain Army commanders seemed to be a little concerned over the cut-off time which they were given. This deadline, which is usually between two and four o'clock in the afternoon, is simply designed to have as many preplanned missions in the Joint Operations Center and the Army-Ground Operations System early in the day so that adequate planning and crew-briefing can be accomplished. An additional purpose is to provide information with relation to air and ground action for the following day to the Army and Air Force Commanders at their evening planning conference. There is, however, no prohibition against requesting preplanned missions at any time. Naturally, the sooner they are transmitted the better it is for all concerned. In some instances the Army section and the Joint Operations Center received preplanned requests until midnight, and occasionally later. Inasmuch as we were aware that late requests would arrive, aircraft were placed on JOC alert to meet these delayed requirements.

Two other problem areas seemed to develop. One was the immediate request set-up. These requests, as I trace them from the battalion to the JOC came through rather rapidly. However, the acknowledgement to the requesting unit was, in some instances, relatively slow. We could alert our JOC planes at North Field and have them over the battle area in 17 minutes; and yet, many times the acknowledgement of the request did not reach the battalion for an hour or more. This is a communications problem which I am sure the Army will give due consideration. One of the reasons that the requests arrived so rapidly was because the Mark 20 was utilized. This, as you know, is our most adequate means of control in connection with the request net. The result of this utilization of the Mark 20 was to immobilize them. Consequently, they were unavailable for use by the Forward Air Controllers. If the Army proposes to use the Mark 20 as a primary part of the request net, a sufficient number of the vehicles should be available for the exclusive use of the Forward Air Controllers.

The other problem was that of Army aviation in the battle area. It was necessary to cancel several sorties because of extensive use of light aviation planes. I believe that between us, probably at the Air Force - Army level, we will be required to perfect some system of control of Army aviation. I am sure that we can have it worked out before our next joint maneuver.

As to statistics: The Ninth Air Force flew 2300 sorties - 38% were air superiority missions, 25% interdiction and 37% in close support of the Third Army. Additionally, 380 day and night reconnaissance sorties were flown, about 50% for the Army and 50% for the Air Force. Thirteen atomic sorties were flown, nine in air superiority and four joint intelligence missions between the Army and the Air Force. All of these targets were of primary interest to the Army.

Without repeating their comments, I indorse the remarks of General Douglass and General Cleland with respect to the magnificent cooperation between the Army and the Air Force. The coordination between the two services in this maneuver was the best that I have ever seen. The professional capability of the personnel in the JOC was outstanding.

Well, now, of all the things that could be said, I want to mention this particular point--individual, small unit training, and leadership. It's the thing that disturbs us most at the moment.

You will return to your units, I'm sure, with an understandable feeling of satisfaction for the fine job that you have done here in this maneuver, and I am particularly glad to hear the good critical remarks made by the speakers before me here this morning. I think you too should return with a feeling of urgency, a determination to do something about your own commands. To quote our last President, Mr. Truman, "We walk in the shadow of a war 'and the shadow reaches out and touches all of us--you and me.'" Our politicians, our political friends in Washington may investigate, and the strategists in Washington may speculate, and there's room for much conjecture, but not on the part of you unit commanders. What you must do is get your units, and the individuals in them, in the best possible physical shape and able to use the weapons in their hands to the highest degree ever reached. If we have these things on your part, those other things will take care of themselves.

I have unfortunately had but one day with the maneuver. I wish I had more. It was good to have been with you for that one day and to be here today. I am particularly delighted to see so many airmen here today. It is inconceivable that any successful combat action in the future will be a uni-service one. We must work together jointly, and it's good to see you working so effectively here as you have in this Exercise.

I will be followed by General Bolling.

LT GENERAL BOLLING:

General Ridgway, General Weyland: There is little I can add to what has been said. But as we near the close of Exercise FLASH BURN, I should like to pay recognition to the following:

General Williams, my Third Army Deputy; General Molitor and Colonel Hill, for carrying the real load of the Exercise from the very start. Everything well done from the Director level can be attributed to their direct and personal supervision, from the planning stage to completion.

To the Director Staff, gathered from Headquarters Third Army and units within and without Third Army, I submit my personal commendation.

To General McQuarrie, Colonel Mearns, and their umpires, I give great credit for their close attention to the many problems that confronted them and their prompt effective solutions to these problems. A most difficult mission well done.

And to the so-called "non-participating" personnel, such as the Visitors Bureau, Billeting Detail, PIO, Headquarters Commandant, and many others, I express my thanks.

The next speaker is Major General James M. Gavin, G-3, Army.
Thank you.

We are faced, from the viewpoint of Department of the Army, with a rather critical period--a period in which, in the field of mobility, we are upon the threshold of many new forms and many new types, particularly in aircraft. In the field of firepower, which we will have brought to bear against us and we in turn can also use, firepower in terms such as man never conceived of before. And with both of these, we hope to improve communications so that they can be integrated effectively. One purpose of this maneuver was to examine many of the problems associated with these things.

Now, from a personal point of view, I have been back in the United States for about five weeks. It's about six weeks since I last saw the Red Army. It's a lot better looking Army than a lot of us, and some of you here I know who saw it, and a lot of us saw it in 1945. The troops are young, and they look tough. Their clothing looks better, their weapons look cleaner. From their tanks that I have seen on the way to, and in Berlin, their tanks look better maintained, their vehicles are better. When it comes--in the attack it will come with atomic weapons, and I would presume, in some abundance. And if it comes with an inclination, on the part of some individuals, to die for Communism, that is what we are here to accommodate them to do. That's why we are here. These exercises are highly theoretical in some respects, but they should be to all of us, compellingly real, for we are training to meet a very tough, very able, well-equipped foe, well-equipped with atomic weapons.

Speaking of the mobility we have and the firepower and the communications to intelligently apply them, volumes will be said about them and volumes written in the next year or so. We know there will be greater dispersion on the battle field and very likely, there will be a need for packet replacements such as was mentioned here today, better camouflage, better communications, considerable deeper battle zone, alternate command facilities--all of these things.

But of all of them, the thing that disturbs one most is that for the need for the highest quality of small unit leadership and individual performance. This is certainly valid and inescapable. There will be dispersion to the extent that a tremendously increased burden will be placed upon individuals and small units. So, first, we must point to and get in the best individual physical shape possible. All of our troops and all of our small units, to meet every demand that possibly could be made upon them on the battle field, must have confidence coming from, a sureness, a certainness of using the small arms now issued, for everybody in a division at least will have to fight. There is no such thing as the infantry fighting only in front and units to the rear--whether they are artillery, engineer, ordnance, quartermaster, division headquarters or what--being remote from the battle area. Not at all. It will be deep, well deep, beyond division headquarters certainly in the future. So that we should have well-trained small units, in training not only in terms of good physical condition, ability to use hand weapons in combat, but digging, camouflage, ability to function intelligently with inadequate communications which will characterize a lot of our operations.

To Colonel Davis and our briefers who are on lend-lease from Fort Benning, I offer a commendation for portraying at all times a play-by-play account of the maneuver.

To Colonel Coverdale and the entire Logistical Command, I am sure all participants would agree that the support of the U. S. Forces and Aggressors was outstanding.

To the Aggressor Command, we feel we owe a commendation for their tireless efforts to create new situations, all requiring much movement and affording little rest. I sincerely wish this entire outfit was coming to Third Army rather than to Fort Meade.

To the participating units, I also offer a commendation for playing the game hard without any administrative rest, playing it continually and continuing full interest until the conclusion of the play.

Further, I feel we should express our thanks to the personnel of the Post of Fort Bragg for their full cooperation in lessening the difficulties of the administrative burden.

And last, but far from least, may I express for Third Army and those of us participating in the maneuver, our sincere appreciation, respect, and admiration to our sister service, the U. S. Air Force--to Generals Douglass, Timberlake, and Alexander, the pilots, the crews, the ground personnel who worked with us as a team to make this Exercise a reality and a success. Quite frankly, we could not have possibly received greater cooperation and support.

Now with the development of atomic weapons for tactical use, new problems are presented for the commander, and old problems are made more complicated. Three of these problems are: dispersion, concealment, and mobility. With the presence of atomic weapons in this maneuver, these three have received added emphasis. As weapons have increased in destructiveness through the ages, their cost has also increased. The atomic missile is no exception to this. A commander must have a profitable target against which to use his costly atomic warhead. We should use the conventional weapon wherever possible and not labor under the impression that the atomic weapon may be used to drench the entire zone of combat, nor to fire where his enemy might, I repeat, might have troop concentrations or installations. We must consider a possible opponent also has the capability of atomic attack. Hence, the commander must make every effort to avoid presenting a profitable target. To accomplish this, he must insist upon dispersion of troops and installations. It is true, dispersion lessens control. So the commander should find an effective compromise. He must have the full knowledge of the effectiveness of the various atomic warheads and the capability of his means of communication and control of his forces.

In this Exercise, the commander of the U. S. Forces did so disperse his troops to assure that the success of his tactical mission was not jeopardized by an atomic attack. We must work on the principle that when the inventors and the scientists provide a better mousetrap, nature will produce a smarter mouse. We can see dispersion cannot be complete or control is lost. Therefore, concealment is essential to avoid the presentation of a profitable target.

During this Exercise, I have flown over practically every unit engaged in the maneuver, not once, but several times. Initially, concealment, particularly in bivouac areas, was not effective. Camouflage discipline was lax, and the following could be very easily and readily picked up from the air: clothes and white towels hung out to dry, mess kits reflecting the sun, papers on the ground, long and extended mess lines, and bunching of vehicles. It was gratifying, however, to note that these breaches of camouflage discipline were corrected to a great extent as the maneuver progressed. In this age, camouflage discipline is more important than ever before. And every man in the Army must be made to realize its importance. If you present a profitable target, you will be hit.

Lastly, mobility has increased in importance. Forced upon us by atomic warfare, successful battles still depend upon the commander having his forces properly disposed in the right place at the right time. By the proper use of modern means of transportation, the commander can disperse his forces widely and still mass quickly at the decisive point. In this Exercise, we have placed great emphasis on mobility. The 82d Airborne Division was concentrated at Camp Mackall from scattered air bases and was reinforced with the 37th Division from an area over 900 miles away.

Helicopters were employed to transport infantry forces to seize critical ground in advance of an attack. So, we must continually study methods to increase our mobility. We must improve techniques of moving forces widely dispersed to the area of close contact with the enemy at the decisive point in the battle zone. There, although no longer dispersed, their vulnerability to atomic attack will be lessened, since the enemy forces would most certainly suffer from the same blast.

We have emphasized in this Exercise these three old problems-- dispersion, concealment, and mobility. I feel we have made great progress toward the solutions. This has been evident in the noted improvement by our troops as the Exercise progressed. We were greatly impressed with the seriousness displayed as troops dug in. Not only our front line troops, but also the services. It is believed the participants in this Exercise have an increased awareness for the atomic age, and therefore we should give continued thought toward improving our training in this field.

I will be followed by Lt Gen Dahlquist, the Chief, Army Field Forces.

LT GENERAL DAHLQUIST:

General Ridgway, General Weyland: As General Molitor pointed out, the chart showed, and General Cleland mentioned, FLASH BURN had a very very large number of objectives. This was deliberately done when we set up the maneuver.

We stand on the threshold of a new era so far as our Army is concerned. The work of our scientists and industry is starting to come to life. New organization, new methods of employing new weapons must come out; and we desired, out of the Exercise, to get as much information as we possibly could. Units from five of our armies, and individuals from all six, participated in this Exercise. In general, the major training objectives that we set forth at Field Forces for Exercise FLASH BURN have been achieved during these last three weeks. Many deficiencies in performance have come to light. But on the other side of the ledger, a lot of good, sound work has been done. We have had two teams of fifteen officers each here throughout the Exercise as well as General Ennis and some people from Fort Bliss, and General Hasbrouck from Sandia Base.

I was here just before the Exercise started and came down just before the Exercise ended. I want to mention a few of the major points that my people have noticed and that I saw in the short time that I was able to be here. We highlighted atomic play during FLASH BURN because we are aware that the Army must be prepared to exploit this powerful tool to the maximum extent. Planning in the use of atomic weapons was enthusiastically executed at all echelons. It was gratifying to know how far we have progressed in getting officers trained in the theory and the use of atomic weapons. However, the fallacy of unilateral planning for the employment of these weapons was apparent. There is an urgent need for crystallization of joint doctrine in this field, and we will intensify our efforts, at Field Forces, to accomplish this.

The integration of atomic weapons support with ground force tactics is still in its infancy. Security restrictions, the term "special weapons," and inexperience, all contributed to the tendency to plan the atomic portion of the military maneuver as a separate and distinct operation. What General Bolling just said was certainly true. We have got to consider the use of atomic weapons not as something separate and distinct, but as something that has got to be worked into our whole family of weapons, and of greatest importance, with our tactical maneuver. This needs to be rectified in our training and planning, and will be.

A second thing in which we were particularly interested was the Army technique of air movement and aerial resupply. A war of the future faces us with far greater need for both tactical and strategic mobility than we have ever had before. The airborne drops were conducted in an excellent manner. By necessity, of course, because of administrative and safety restrictions, there were artificialities which had to be introduced into it. Administrative rather than tactical loading of aircraft and the

administrative introduction into the airhead of certain equipment and supplies detracted from the realism of the problem. Army units being lifted by air for this kind of an operation should be combat-loaded so as to be able to accomplish the mission upon arrival in the airhead. In our opinion, continued emphasis must be placed on airborne operations.

The one point that was impressed upon me in this Exercise is our great need for the development of a real assault airplane. Not many places could we have strips such as at Mackall. And as General Douglass pointed out, we needed more than one strip--and of course we have got to be able to operate in areas which have not been prepared. The conduct of air-ground operations stood out as a marked improvement over all similar maneuvers. Although errors occurred and proper coordination was sometimes lacking, on the whole, greater professional competence was in evidence than has been noted previously. There is a better appreciation of the capabilities and limitations of tactical air at all levels of Army command. However, much still remains to be accomplished, and I certainly agree with General Timberlake that communications emerged as one of our greatest weaknesses. This comment applies not only to equipment, but to lack of trained personnel and established procedures and techniques.

Mine warfare was another gimmick that we threw into the maneuver, and for a particular reason. The potential enemy we face is extremely strong in armor. Effective, skillful use of mines is going to be an absolute urgent necessity so far as we're concerned. I don't believe that minimum effective standards in mine warfare were attained here. However, we certainly learned some lessons out of it. Many planned fields were not laid, although the mines were stacked nearby. Other fields consisted of mines scattered at random, without being buried or marked. Marking and recording procedures were not complete. That has always been a great weakness so far as the Americans are concerned. We have not been faced previously with the necessity for this. I think in Europe in the last war, we probably had more casualties from our own mines than did the Germans. We're going to be facing an enemy the next time who is going to be coming at us rather than trying to get away from us. I can't emphasize too strongly the necessity for working on the business of mine warfare.

This is the first time we have had electronic warfare on a large scale. And the first time there has been a specific training objective. The electronic warfare units which worked for Aggressor gained very valuable experience. We now have a better realization of the capabilities and limitations. Similarly, the U. S. troops, by being subjected to it, became aware of the potentialities of atomic warfare. I was particularly impressed by the fact that the electronic warfare played against us was not as effective as we thought it was going to be. It was quite gratifying to know how well our operators were able to avoid the jamming procedures. Here again, however, I want to warn that we are up against a most skillful operator of electronic warfare, and it's a thing that we're going to have to keep working on, because if he's successful, our operations will largely fail, because of the great dependence that we have to place upon communication.

General Williams mentioned the fact that we have to make our supply drops during the daytime for safety reasons. I think it is quite important that we emphasize the necessity for the use of darkness. My people picked up the fact that much logistic supply went on in the daytime. We cannot figure we are going to have the atomic weapon and not the enemy. Probably the first defense against that weapon is going to be to knock his out. But the next one is going to prevent him from knowing where to use it. And we can only do that if we emphasize and reemphasize our passive means of defense against him, and the greatest of those is concealment. Here again we have a national proclivity which we have to overcome in the Army. That is, we're used to vehicles, we're used to being out in the open. I well remember in the last war that I could almost always find where the front line was when I was in Cub Plane by looking to see where the vehicles were. Where I saw no vehicles, I knew that was the German side, and where I saw a great many of them, that was the American side. I can not re-emphasize too much that every possible bit of movement you can make should be made under cover of darkness. We have stressed that--we stressed night fighting and night operations. Certainly, the same thing applies in all logistic movement all the way to the back.

I have mentioned two or three of the new things we are working on--special weapons, rockets, electronics, and their effect. But we must not forget that the basis of all operations in the future, as well as in the past, is going to be small unit tactics and small unit control. My people tell me that in general they were very good. There were exceptions. I saw a couple myself. We were operating in relatively heavily wooded country and in several instances, there was a failure of joint armor-infantry operations. The one that I particularly picked up myself the last morning was a failure of the small unit leader--platoon sergeant--of knowing exactly where he was going and what his objective was. It's a terribly difficult thing in maneuvers of this kind, but I don't believe we can emphasize too much that good operations is going to depend on getting complete information down to the lowest echelon.

The umpire system used in this maneuver, in my opinion, is the best I have ever seen. I certainly want to congratulate the people who thought up the packet system, and all my observers repeated the same thing.

I want to congratulate General Bolling and his staff for their energy, enthusiasm, and imagination displayed in the conduct of FLASH BURN. I want to congratulate General Cleland, General Farrell, General Ginder, and all the other commanders for the enthusiasm and the spirit with which their troops entered into the maneuver. That applies all the way down to the many scattered small units that were brought in from other parts of the country.

Certainly, the work that General Douglass and General Timberlake did was extremely gratifying. Their whole-hearted support is what made the Exercise really a success. There were many problems which were solved only because of Army and Air Force personnel working together with unity of purpose. As I have indicated before, there is an urgent need for

crystallization of joint doctrine, particularly to develop clear lines of command and control for all aspects of joint operations.

This Exercise has proved the value of maneuvers as a vehicle for training of Army troops. In this one, unlike most others, it was extremely valuable for the testing of new concepts, tactics, and techniques. We had a great many people here as observers. We know we got a great deal out of it, and we hope that before very long, we can start turning out to you the results of our studies here.

On behalf of the Field Forces, I am very glad to welcome to the United States, the new commander of the Tactical Air Command, who has just returned from Korea. I want to introduce General Weyland.

GENERAL WEYLAND:

Gentlemen: I have taken over the Tactical Air Command now less than one week. These exercises were already well underway, so I am here today to listen and not to offer any detailed comments.

Immediately upon my assumption of command, General Douglass and General Timberlake reported to me at Langley Field, in the course of which they gave me a brief rundown on the conduct of these training exercises. The fine things they had to say about the cooperation and the teamwork with the Army, I'm happy to say, were well borne out by General Williams.

Let me say that I am more than pleased to take over Tactical Air Command and to have the opportunity of working with the Army Field Forces in this country. I hope that such experience and continuity as I have had in the field of Tactical Air operations will be put to some use here.

I am very happy to be back home, incidentally, as well. Thank you.

GENERAL RIDGWAY:

I want to first express my personal welcome to General Weyland. It was my honor to share service in the Far East with him.

Two great events occurred today--we have had the conclusion of FLASH BURN and the running of the four-minute mile. There will be a lot of talk about the four-minute mile, and I hope a lot of talk about the maneuver. But I hope that there will be much more talk about FLASH BURN.

I was deeply gratified to hear what I heard today--a broad range of comments from the top level of imaginative minds on tactical things down to the eternal necessity of command and staff supervision.

There isn't any mystery about what makes a good military organization. I believe I can sum it up in two or three words--training and command supervision.

Since training is essential, leadership and supervision by an experienced command staff is necessary in a field exercise. And since the field exercise is a key point in the training cycle, I ask every army officer to search out his brain and memory for the things he could do better the next time, and let him apply himself not only to his own efforts but to an effort to transmit the things he has learned all the way down to every chain of command with which he is associated.

I looked around in this audience once or twice and I didn't see anybody taking notes. Maybe everybody's memory is better than mine. There are things which make an impression on each of you in an exercise of this character, things that are of such importance that we can't have them happen very often. You should take them down on paper. It's an indication to me of the thoughtful, determined officer in not letting anything elude him. In the future, when you go to a critique, do have pencil and paper. There must be something of importance that relates to your own professional level that you want to make a point of taking down on paper.

In your thinking, which I hope and know will go on about Exercise FLASH BURN, many of you will not have time to read the Final Report, and some of you will not even see the Report. But I hope you will give thought to the innumerable things which you must have heard here today.

The integration of these new weapons into the old will bring increased facility, and increased capabilities. The development of these weapons will have a tremendous impact on our tactical organization because of the new techniques we have been testing here. If a new weapon or technique isn't sound we are not going to exploit it. Eternally, we must be shifting and readjusting the principles of war to the endlessly changing conditions of war.

Exercise FLASH BURN has demonstrated the need for mobility of mass and the economy of force in moving onto the objective. It has demonstrated the vast change in the relatively important role of physical mobility--trucks, helicopters, and aircraft furnished us by our brothers of the Air Force--and mobility of action in manipulation of these forces.

While these areas of mobility are essential, they have tended to give the soldier the idea that he must be transported everywhere he goes. In Korea I saw soldiers wait twenty-five minutes for a truck when they could have used the quickest means of transportation available--their feet--to get them to their objective or destination. In the training of the individual soldier it must be constantly stressed that mobility by foot is still the most dependable means of mobility in action. You can see from this example that mobility, the critical element in the maneuver touched upon by General Bolling, also relates to mobility of thinking as well as mobility of action.

These are just some of the things that occurred to me which I wanted to accentuate a little bit.

The last and final thing is the importance of the individual. He is the decisive factor. He is the fellow that will win or lose for you. We have these exercises for training and for the development of teamwork. We must have mutual respect between the units, the leaders of the units, and between the branches. But at the bottom, gentlemen, we must have respect between individuals.

You will get mutual confidence better in a maneuver than anywhere else, short of war. To breed the mutual individual respect that makes us unbreakable in battle, we must be certain that the other fellow is willing to assume responsibility, as well as ourselves. When you know that the fellow on the right hand and left is that kind of man, then you have the best human guarantee of success.

I want to say to General Bolling, to Generals Timberlake, Douglass, Cleland, and to the Division commanders, right down the line, that what I saw in my brief contact with the Exercise was deeply gratifying; and what I heard and saw this morning, more so.

I hope you had a good time in this maneuver. I envy your having been here. I assure you that I would have traded places with any of you throughout the Exercise.